

126-5-3-6/31

Magnetic Properties of Magnetically Anisotropic Specimens of Ferromagnetic Powders

between the texture and the specimen axis is denoted by  $\phi$ .) A dependence is established of the character of the anisotropy of magnetization curves of magnetically textured specimens, made of thin powder of the MnBi alloy, on the dimensions of the powder particles. For certain particle dimensions, a magnetization process is observed in the longitudinally textured specimens which manifests itself in the fact that saturation is reached in fields of lower intensity than the maximum values of the residual magnetization and the coercive force. On the basis of the measured magnetization curves and of particular hysteresis cycles of isotropic and magnetically textured specimens of Mn-Bi alloys of various degrees of dispersion, it was established that in fine powders a magnetic transition structure from the multi-domain to the single-domain one as well as a single-domain structure can exist. A model of the transient magnetic structure is put forward.

There are 9 figures, 1 table and 7 references, 6 of which  
Card 2/3 are Soviet and 1 French.

126-5-3-6/31

Magnetic Properties of Magnetically Anisotropic Specimens of Ferromagnetic Powders

ASSOCIATION: Institut Fiziki Metallov Ural'skogo Filiala AN SSSR  
(Institute of Metal Physics, Ural Branch of the Ac.Sc., USSR)

SUBMITTED: May 17, 1957

- 1. Metal powders--Magnetic properties    2. Ferromagnetic materials
- Preparation    3. Hysteresis

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126-5-3-7/31

AUTHORS: Shur, Ya. S., Shtol'ts, Ye. V. and Kandaurova, G. S.

TITLE: The Magnetic Properties of Magnetically Anisotropic Specimens Made of Ferromagnetic Powders (Magnitnyye svoystva magnitno-anizotropnykh obraztsov iz ferromagnitnykh poroshkov) II. The Dependence of the Curves of Magnetization on the Method of Obtaining the Demagnetised State (II Zavisimost' krivykh namagnichivaniya ot sposoba polucheniya razmagnichennogo sostoyaniya)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957. Vol.V, Nr 3, pp 421-427 (USSR)

ABSTRACT: A series of powders each with a uniform particle size, lying in the range 250 to 4μ, was made from a manganese-bismuth alloy containing about 50% ferromagnetic phase. Magnetised dies were prepared from the powders by mixing them with a suitable filler, pouring into a mould, fusing at about 60°C and cooling in a magnetic field. The dies were then demagnetised either by cooling to -196°C in an alternating field, or at room temperature, by using a field of variable magnitude but constant sign to return the material to the demagnetised state from the appropriate point on one or other branch of the hysteresis loop. A part of the paper is devoted to the study of

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The Magnetic Properties of Magnetically Anisotropic Specimens Made of Ferromagnetic Powders II. The Dependence of the Curves of Magnetization on the Method of Obtaining the Demagnetised State

these 'curves of return'. Subsequent remagnetization to saturation was shown to follow a course dependent on the mode of demagnetization. Demagnetization by the first method permitted rapid remagnetization. After demagnetization at room temperature by a field of the same sign as the original magnetization, the remagnetization curve assumed a step-like form except at large particle sizes. If, however, the specimen was demagnetised by a field of opposite sign, remagnetization proceeded comparatively smoothly except at the lowest particle sizes when the curve again had a step-like appearance. An attempt is made to explain the observations qualitatively in terms of a transient magnetic structure intermediate between the single and many domained types. In presence of such a structure in the direction along the axis of the texture of magnetically anisotropic specimens, a fundamental role in the process of magnetization is played by the hysteresis in the formation and growth of remagnetization nuclei.

Card  
2/3 There are 8 figures and 2 references, both of which are Soviet.

The Magnetic Properties of Magnetically Anisotropic Specimens Made  
of Ferromagnetic Powders II. The Dependence of the Curves of  
Magnetization on the Method of Obtaining the Demagnetised State

126-5-3-7/31

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR  
(Institute of Metal Physics, Ural Branch of the Ac.Sc.,  
USSR)

SUBMITTED: May 17, 1957

1. Metal powders--Magnetic properties    2. Ferromagnetic materials  
---Test methods

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SOV/126-6-2-5/34

AUTHORS: Kandaurova, G. S., Shur, Ya. S. and Shtol'ts, Ye. V.

TITLE: The Magnetic Properties of Magnetically Anisotropic Specimens Prepared from Ferromagnetic Powders.  
(Magnitnyye svoystva magnitno-anizotropnykh obraztsov iz ferromagnitnykh poroshkov). III. Anisotropy in Magnetic Properties (Anizotropiya magnitnykh svoystv)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 2, pp 229-236 (USSR)

ABSTRACT: The domain structures of powders of MnBi alloy and Co are determined from disc-shaped specimens prepared from powders of 1 to 100  $\mu$  in particle size. The Mn-Bi alloy was prepared by sintering the components at 320°C; MnBi content about 50%. The sinter was powdered and used without annealing. The Co was powdered from a piece of cast metal and annealed in vacuo at 600°C. (The method of preparing the discs is not described). Fig.1 shows the magnetization curve for an MnBi disc of particle size 25  $\mu$ , with various angles  $\phi$  between the field and texture axes. Fig.2 gives the corresponding hysteresis loops. Fig.3 shows a polar diagram of the coercive force for MnBi discs of various particle sizes (texture

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The Magnetic Properties of Magnetically Anisotropic Specimens  
Prepared from Ferromagnetic Powders. III. Anisotropy in Magnetic  
Properties

axis horizontal). Fig.4 shows how the coercive force of MnBi varies with particle size for two values of  $\phi$ ; Fig.5 resembles Fig.3 but the residual magnetization is shown instead. Figs. 6 and 7 are analogous to Figs. 1 and 3 respectively, for Co powder of  $4\mu$  particle size; Fig.8 is analogous to Fig.4 and Fig.9 to Fig.5. The results are discussed in the light of the prediction that single-domain particles should occur in larger sizes the higher the anisotropy constant and saturation magnetization. The results agree with this prediction in general, but the precise shapes of the theoretical curves (shown dashed in Figs.10 and 11) are not the same as those found by experiment for MnBi of  $4\mu$  particle size. Some of these effects can be attributed to the method used for demagnetizing the MnBi powder (decreasing alternating

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SOV/126-6-2-5/34

The Magnetic Properties of Magnetically Anisotropic Specimens  
Prepared from Ferromagnetic Powders. III. Anisotropy in Magnetic  
Properties

field at liquid nitrogen temperature).  
There are 4 equations, 11 figures and 8 references,  
6 of which are Soviet, 2 English.

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR  
(Institute of Metal Physics, Ural Branch of the Ac.Sc.,  
USSR) and  
Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo  
(Ural State University imeni A. M. Gorkiy)

SUBMITTED: May 17, 1957

Card 3/3

1. Ferromagnetic materials--Magnetic properties    2. Alloys--  
Sintering    3. Powders--Applications    4. Alloys--Heat treatment

AUTHORS: Shur, Ya. S., Shtol'ts, Ye. V. and Kandaurova, G. S. SOV/126-6-3-5/32

TITLE: Magnetic Properties of Magnetically Anisotropic Specimens of Ferro-magnetic Powders. IV. Temperature Dependence of Magnetic Properties of Powdered Specimens of the Alloy MnBi (Magnitnyye svoystva magnitno-anizotropnykh obraztsov iz ferromagnitnykh poroshkov. IV. Temperaturnaya zavisimost' magnitnykh svoystv poroshkovykh obraztsov splava MnBi)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 3, pp 420-425 (USSR)

ABSTRACT: Previous papers of this series were published in Nos 5 and 6 of the present journal (1957, Refs. 1-3). The anisotropy of the coercive force in powdered specimens of MnBi in the temperature region -196 to +20°C has been studied and results are now reported. A study was made of the magnetisation curves, recovery curves and other features of the hysteresis loops at a temperature of -196°C. It is shown that when the temperature of finely powdered specimens is reduced from +20° to -196°C, the form of the magnetic structure of the particles changes due to a reduction in the constant of anisotropy. A study of the temperature dependence of the magnetic properties of specimens of MnBi powders of different dispersity has shown that in the same

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SCV/126-6-3-5/32

Magnetic Properties of Magnetically Anisotropic Specimens of Ferro-Magnetic Powders. IV. Temperature Dependence of Magnetic Properties of Powdered Specimens of the Alloy MnBi

specimens at different temperatures the existence of magnetic structure of different form may be observed. Thus, the transition structure which is present at room temperature in fine powders ( $1 - 10 \mu$ ) disappears at  $-196^{\circ}\text{C}$  and instead of it a multidomain structure is found. This is connected with the reduction in the constant of anisotropy at low temperatures. There are 6 figures, 1 table and 11 references, of which 8 are Soviet, 2 French and 1 German.

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR  
(Institute of Physics of Metals, Urals Branch, Academy of Sciences USSR)

SUBMITTED: June 21, 1957.

1. Bismuth-manganese powder alloys--Magnetic properties
2. Bismuth-manganese powder alloys--Temperature factors

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AUTHORS: Shtol'ts, Ye. V., Shur, Ya. S., Kandaurova, G. S. SOV/48-22-10-20/23

TITLE: On the Anisotropy of the Coercive Force in Magnetically Anisotropic Samples of Fine Powder (Ob anizotropii koertsitivnoy sily v magnitnoanizotropnykh obraztsakh iz tonkikh poroshkov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958, Vol 22, Nr 10, pp 1269 - 1272 (USSR)

ABSTRACT: In the present paper the authors give a report on measurements of the coercive force of uniaxial magnetic powder produced from the following substances: Cobalt, Mn-Bi-alloy, magnetite, and iron- $\gamma$ -oxids. The angular dependence of the coercive force of various powder samples is shown in figure 1. A comparison of the curves shows that in textured samples made of magnetically uniaxial powders the angular dependences of  $H_c$  may exhibit a different character. The process of the technical magnetization in directions close to the axis of texture differs from the process of irreversible rotation. Probably this is caused by the fact

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On the Anisotropy of the Coercive Force in  
Magnetically Anisotropic Samples of Fine Powder

SOV/48-22-10-20/23

that the one-domain structure in the particles has not yet completely been reached. The investigation of other rules governing the magnetic properties of fine powders results in the assumption that these particles exhibit a particular domain structure (Ref 4). In one particle only one basic domain and several closing domains exist. As a consequence of this the formation, the growth, and the diminution of the closing domains plays a decisive role in the process of technical magnetization. The assumption of the existence of such a domain structure is confirmed by observations of powder patterns (Ref 5). In the case of a poly-domain structure the coercive force varies inversely as  $\cos\varphi$  (Ref 6). Therefore the coercive force increases with increasing angle  $\varphi$ . A complicated dependence of  $H_c(\varphi)$  exhibiting a maximum at a certain value of  $\varphi$  which varies between  $\varphi = 0$  and  $\varphi = 90^\circ$  may be expected. Such a regularity was observed in samples of cobalt, magnetite, and iron- $\gamma$ -oxide powder. In this case the structure apparently approximates the poly-domain structure. The magnitude of  $H_c$  of these powders,

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On the Anisotropy of the Coercive Force in  
Magnetically Anisotropic Samples of Fine Powder

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however, is considerably higher than that of the respective massive substances. In the examined substances a change of the anisotropic character was not observed when the dimensions of the particles were modified. A change in the anisotropy of  $H_c$  together with the diminution of the particles was found in the investigation of magnetically anisotropic samples consisting of powder of the "low-coercive" Mn-Bi alloy. The dependence of  $H_c$  ( $\gamma$ ) found in this instance is given in figure 2. In powder of the low-coercive Mn-Bi alloys the diminution of the particles leads to a change in their magnetic structure which can be determined from the shape of the angular dependence of the coercive force. The observation results and their analysis show that in magnetically anisotropic ferromagnetics the data on the anisotropy of the coercive force besides other characteristics may give certain indications concerning the magnetic structure. There are 2 figures and 7 references, 5 of which are Soviet.

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On the Anisotropy of the Coercive Force in  
Magnetically Anisotropic Samples of Fine Powder

SOV/48-22-10-20/23

ASSOCIATION: Institut fiziki metallov Akademii nauk SSSR (Institute of  
Metal Physics, AS USSR) Fiziko-matematicheskiy fakul'tet  
Ural'skogo gos. universiteta (Physics and Mathematics  
Dept. at the Ural State University)

Card 4/4

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67753

SOV/126-8-5-5/29

AUTHORS: Shur, Ya.S., Shtol'ts, Ye.V., Kandaurova, G.S., and Redneva, L.V.

TITLE: The Temperature Dependence of Magnetic Properties of MnBi Alloy Powder Samples with Magnetic Texture

PERIODICAL: Fizika metallov i metallovedeniye, Vol 8, 1959, Nr 5,  
pp 678-684 (USSR)

ABSTRACT: The authors studied the temperature dependence of magnetic properties of samples made of the MnBi alloy powder. This alloy has a very high magnetic anisotropy constant  $K$  at room temperature (Ref 4) and a high value of the critical particle size,  $d_{cr}$  (below this size the powder particles exist in monodomain state only). On lowering of temperature the value of  $K$  falls sharply and this is accompanied by a sharp fall of the critical particle size  $d_{cr}$ , which is a function of  $K$ . It follows that on lowering of temperature the magnetic structure of MnBi alloy powders will be altered (a polydomain-monodomain transition will occur) and this change of structure will affect some magnetic properties. Consequently we can make some deductions about the structure of this magnetically uniaxial material from ✓

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67753  
SOV/125-S-5-5/29

The Temperature Dependence of Magnetic Properties of MnBi Alloy  
Powder Samples with Magnetic Texture

the temperature dependence of its magnetic properties. The alloy was produced by heating powders of Mn and Bi together at 300 °C and its coercive force was of the order of 1000 Oe. The alloy was powdered mechanically and several fractions of the powder with particle size from 2 to 20  $\mu$  were obtained. Samples were made from each fraction by mixing the powder with a binder and by placing this mixture in a disk-like form and allowing it to set between two poles of an electromagnet. In this way magnetically textured samples were obtained whose texture axis lay along the direction of the electromagnet field. Magnetic properties were measured between 20 and -150 °C using a ballistic throw method. Samples were demagnetized at the temperature at which a particular set of measurements were carried out by a suitable constant magnetic field in the reverse direction. The angular dependences of the coercive force and residual magnetization were obtained, magnetization curves were recorded and dependence of the residual magnetization (for partial magnetization cycles) on the magnitude of  $H$ .

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The Temperature Dependence of Magnetic Properties of MnBi Alloy  
Powder Samples with Magnetic Texture

powders with 30 and 3  $\mu$  particle size (curves 1 and 2 respectively). Fig 4a shows the 20 °C dependence of the relative magnetization  $I/I_s$  (curve 1) and the relative residual magnetization  $I_r/I_s$  (curve 2) on the magnetic field intensity along the texture axis (The results of Figs 4a, 4b and 4B all refer to a sample made of powder with 6  $\mu$  particle size). Figs 4b and 4B give the same dependences at -37 °C and at -60 °C. The authors draw the following conclusions from their results.

- 1) On lowering of temperature the curves representing the angular dependence of the coercive force depart more and more from the theoretical curve  $H_c(\psi)$  for a monodomain sample. This is due to a decrease of the anisotropy constant and consequent lowering of the magnitude of  $d_{cr}$  as a result of which the magnetic structure of powder particles changes gradually from monodomain to polydomain type.
- 2) At room temperature, when the anisotropy constant  $K$  and the critical particle size  $d_{cr}$  are large, the residual magnetization produced by partial magnetization

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AM/126-8-5-5/29

The Temperature Dependence of Magnetic Properties of MnBi Alloy Powder Samples with Magnetic Texture

cycles is close to the maximum magnetization of a complete cycle and the maximum residual magnetization is reached in the saturation field, i.e. the magnetic structure is practically monodomain. On lowering of temperature the values of  $K$  and  $dcr$  decrease and the maximum residual magnetization remains close to the saturation magnetization but is reached in fields larger than the saturation field (transition structure).

At low temperatures, i.e. when  $K$  and  $dcr$  are low, the residual magnetization is small and is reached in fields lower than the saturation field (polydomain structure).

There are 4 figures and 5 references, of which 3 are Soviet, 1 is English and 1 is French.

Card  
5/5

ASSOCIATION: Institut fiziki metallov, AN SSSR  
(Institute of Physics of Metals, Academy of Sciences  
USSR)

SUBMITTED: July 18, 1959

KANDAUROVA, G.S.

81901

1P. P100  
1P. 1275

S/126/60/010/01/003/019

E073/E335

AUTHOR: Kandaurova, G.S.. and Shur, Ya.S.

TITLE: Certain Magnetic Properties of Manganese - Bismuth  
Alloy Powders

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol.10,  
No.1, pp 37 ~ 41

TEXT: In earlier published work (Refs. 1 and 2) the authors detected a number of features in manganese-bismuth alloy powders which could be explained on the assumption that such powders possess a particular type of magnetic structure, a transient structure. Later on, this structure was detected experimentally by means of the powder-pattern method (Ref.3). The properties of the artificially textured powders were determined not only by the magnetic structure of the ferromagnetic particles but also by the presence of a magnetic structure, i.e. by the parallel orientation of the axes of easy magnetization of the individual particles. The authors considered it of interest to make a special study of the magnetic properties of isotropic (pseudo-crystalline) specimens from manganese-bismuth powders of various degrees of dispersion. It can be assumed in such a case that X

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S/126/60/010/01/003/019  
E073/E335

Certain Magnetic Properties of Manganese - Bismuth Alloy Powders

the magnetic properties of specimens are determined solely by the magnetic structure of the alloy. In the experiments, a magnetically uniaxial highly coercive MnBi alloy ( $H_c \approx 1000$  Oe) was studied. The grain size varied between 720 and 6  $\mu$  and the coercive force varied correspondingly between 1350 and 7000 Oe. The specimens were produced from powders of certain grain sizes which were carefully mixed with a binder and the mixture was poured into a mould 15 mm dia., 2 mm high. After hardening of the binder, disc-shaped specimens were obtained which consisted of randomly orientated MnBi particles interspaced with nonferromagnetic interlayers. The concentration of the MnBi powder in the specimens did not exceed 15% in volume. This quantity was sufficient for measuring the magnetic properties by means of a ballistic method but the concentration was low enough to disregard the magnetic interaction between the individual particles. Before the actual measurements the specimens were demagnetized by using three differing methods. The results of the measurements are ✓  
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S/126/60/010/01/003/019  
E073/E355

Certain Magnetic Properties of Manganese - Bismuth Alloy Powders

plotted in Figs. 1-4. These show that the properties of the specimens were similar to those observed earlier in investigating magnetically anisotropic pseudo-single crystals of powder specimens and are due to the existence in the fine particles of a particular magnetic structure which is intermediate between multi- and single-domain magnetic structures.

There are 4 figures and 7 Soviet references.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im.  
A.M. Gor'kogo (Ural State University im.  
A.M. Gor'kiy)

SUBMITTED: February 8, 1960

Card 3/3

KANDAUROVA, G.S.; SHUR, Ya.S.

Certain magnetic properties of manganese-bismuth alloy powders.  
Fiz.met.i metalloved. 10 no.1:37-41 J1 '60. (MIRA 13:8)

1. Ural'skiy gosudarstvennyy universitet im. A.M.Gor'kogo.  
(Manganese-bismuth alloys--Magnetic properties)  
(Metal powders--Magnetic properties)

*KANDAL'ROVA, G. S.*

## PHASE I: BOOK EXPLOITATION

207/4893

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam  
ferritov i fizicheskim osnovam ikh prilozhenij. 2d, Minsk, 1959  
Periody: fizicheskiye i fiziko-khimicheskiye svoystva. Doklady  
(Ferrites; Physical and Physicochemical Properties. Reports)  
Minsk. Izd-vo akad. Nauk. 1960. Errata slip inserted.  
4,000 copies printed.

Spansoring Agency: Nauchnij sovet po magnetizmu AN FSSR. Otdel  
fiziki tverdogo tala i poluprovodnikov AN BSSR.

Editorial Board: Rep. Ed.: M. M. Strel'tsa, Academician of the  
Academy of Sciences; Edite: F. P. Belov, Professor; Yu. I. Kondor,  
Professor; L. M. Polivanov, Professor; R. V. Telsennik, Pro-  
fessor; U. A. Sobolevskiy, Professor; N. M. Shol'ska, Candidate of  
Physical and Mathematical Sciences; B. M. Seolyaravich, and  
I. A. Bashkirov Ed. o Publishing House; S. Khvorakiv; Tech.  
Ed.: I. Volkchanovich.

PURPOSE: This book is intended for physicists, physical chemists,  
radio electronics engineers, and technical personnel engaged in  
the production and use of ferromagnetic materials. It may also  
be used by students in advanced courses in radio electronics,  
physics, and physical chemistry.

CONTENTS: The book contains reports presented at the Third All-  
Union Conference on Ferrites held in Minsk, Belorussian SSR.

The reports deal with magnetic transformations, electrical and  
ferromagnetic properties of ferrites, studies of the growth  
of ferrite single crystals, problems in the chemical and physi-  
cochemical analysis of ferrites, studies of ferrites having  
rectangular hysteresis loops and multicompontent ferrite systems  
exhibiting spontaneous ferromagneticity, problems in magnetic  
attraction, highly coercive ferrites, magnetic spectroscopy,  
ferromagnetic resonance, magneto-optical physical principles of  
using ferrite components in electrical circuits, etc. The Committee on Mag-  
netism, AS USSR (S. V. Vonskovskiy, Chairman) organized the con-  
ference. References accompany individual articles.

## Ferrites (Cont.)

207/4893

Sanchakov, A. A. and I. G. Pakidov. The Electrical  
Properties of Ferrites [Electrical Conductance, Galvanic  
Conductivity, Thermoelectric and Thermomagnetic Properties of  
magnetic ferrites in the Temperature Range of 80 - 400°K].  
Kondor, Yu. M., and V. A. Strel'tsa. Electrical Properties  
of Some Ferrites 286

Zotov, T. D. The Effect of Low-Temperature Thermomagnetic  
Treatment of a Magnetic Single Crystal on its Electrical  
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Shol'ska, N. M., and L. Ya. Shepelevina. Preparation  
Method and Properties of Barium Oxide Magnets 302

Shur, Ya. S. and G. S. Kudurova. The Magnetic Structure  
of a Barium Ferrite 311

Telsennik, R. V. and Ye. P. Kurtnaya. Temperature De-  
pendence of Some Properties of Magnesium-Zinc Ferrites 320

CARD 10/18

LEADER 4740

KANDAUROVA, G.S.; SHUR, Ya.S.; MASLENNIKOVA, F.V.

Dependence of the magnetic structure of a cobalt crystal on its  
size. Zhur. eksp. i teor. fiz. 38 no.1:60-63 Jan '60.

(MIRA 14:9)

1. Ural'skiy gosudarstvennyy universitet.  
(Cobalt crystals--Magnetic properties)

L 18104-63 EWT(1)/EWF(q)/EWT(m)/BDS/ES(s)-2 ASD/AFFTC/ESD-3/IJP(C)/  
SSD Pad/Pt-1 JD/HW

ACCESSION NR: AP3002842

S/0126/63/015/006/0839/0845

AUTHORS: Kandaurova, G. S.; Slur, Ya. S.

74

TITLE: Domain structure of a cobalt monocrystal

72

SOURCE: Fizika metallov i metollovedeniye, v. 15, no. 6, 1963, 839-845

TOPIC TAGS: domain structure, cobalt monocrystal, powder figure , effect of magnetic field

ABSTRACT: The domain structure variation on the basal plane of a cobalt monocrystal has been observed. This structure consists of a maze representing the outlets of the basic spontaneous magnetization domains on the basal plane of the crystal. The sample was placed into a magnetic field with intensity of about 20 000 e; it was oriented parallel to the plane (the horizontal field) and also perpendicular to the plane (vertical field). The maze pattern was obtained after the crystal cooled below the Curie point and after the sample was demagnetized by a field parallel to its hexagonal axis. It was established that powder figures consisting of star patterns are formed under the action of a magnetic field perpendicular to the axis of light magnetization. The rows of stars were oriented in the direction perpendicular to the external magnetic field. This structure was preserved also in the remnant

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L 18104-63  
ACCESSION NR: AP3002842

2

magnetization state of the sample. It is believed that in the latter case the internal crystalline structure approximates the simplest domain structure of plane parallel layers. Orig. art. has: 3 figures.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A. M. Gor'kogo (Ural State University); Institut fiziki metallov AN SSSR (Institute of Physical Metallurgy, Academy of Sciences, SSSR)

SUBMITTED: 28Jul62 DATE ACQ: 23Jul63 ENCL: 00  
SUB CODE: ML NO REF Sov: 003 OTHER: 006

Card 2/2

SHUR, Ya.S.; KANDAUROVA, G.S.

Observation of the initial stages of the formation of remagnetization nuclei in a magnetoplumbite crystal. Fiz. met. i. metalloved. 16 no.1: 158-160 Jl '63. (MIRA 16:9)

1. Institut fiziki metallov AN SSSR i Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo.  
(Magnetoplumbite) (Magnetization)

KANDAUROVA, G.S.; SHUR, Ya.S.

Characteristics of the domain structure in single crystals of  
magnetoplumbite. Fiz. met. i metalloved. 16 no.2:310-311 Ag '63.  
(MIRA 16:8)

1. Ural'skiy gosudarstvennyy universitet im. A.M. Gor'kogo i  
Institut fiziki metallov AN SSSR.

(Magnetoplumbite) (Domain structure)

L 02431-45 E/F(1)/E/F(n)/SWP(t)/EED-2/IMP(b) IWP(c)/ASD(d)/BSD(e) JD

ACCESSION NR: AP4047341

S/01.9/64/000/005/0012/0017

AUTHOR: Kondratenko, G. S.

TITLE: Dependence of the domain structure of a barium ferrite

L 12431-65

ACCESSION NR: A94047341

tial thickness 470, 310, and 180  $\mu$  and with diameter 4--5 mm were investigated. The sample thickness was determined by mechanical grinding and polished only by careful polishing.

aligned with the depth of focus of a microscope with an optimeter,

ACCESSION NR: AP4023406

S/0048/64/028/003/0553/0558

AUTHOR: Shur,Ya.S.; Glazer,A.A.; Dragoshanskiy,Yu.N.; Zaykova,V.A.; Kandaurova,G.S.

TITLE: Regarding departures from homogeneity of magnetization within ferromagnetic domains [Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May to 5 June 1963]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.3, 1964, 553-558

TOPIC TAGS: ferromagnetic domains, ferromagnetic domain inhomogeneity, magnetization reversal nuclei

ABSTRACT: This paper is a short summary of investigations, conducted in the Ferromagnetic Laboratory of the Institute of Metal Physics of the Academy of Sciences, SSSR, concerning departures from homogeneity of magnetization within ferromagnetic domains. The early stages of the formation of magnetization reversal nuclei on the basal plane surface of a magnetoplumbite crystal, and their development into domains was observed by means of powder patterns. Motion pictures of this process were made, and several frames are reproduced. As the magnetizing field (perpendicular to the crystal surface) was gradually reduced from saturating values, the powder pattern,

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ACCESSION NR: AP4023406

initially featureless, first showed large (~0.1 mm) circular bright spots. These decreased in size, increased in number, became irregular in shape, and finally some of them could be seen to grow into twisting domains of opposite magnetization. The initial large spots revealed by the powder pattern are ascribed to "spin vortices", regions in which the spins are inclined to the surface in a circular pattern. These arise because they provide partial flux closure within the crystal, thus reducing the surface energy. As the magnetizing field decreases, the spin inclinations increase, and the disturbance penetrates more deeply into the crystal. Finally spin reversal occurs in the center of the vortex, and a reverse magnetization nucleus is formed. These nuclei grow into spike shaped domains.. If this interpretation of the observations is correct, the intersections of the wall of such a spike domain with a plane parallel to the magnetic axis should have opposite polarities; this was observed to be the case in cobalt. The domains in Co and in MnBi alloy were observed to increase in size with increasing temperature, although the saturation magnetization did not change significantly over the temperature range concerned, the crystal anisotropy decreased markedly, and no domains of closure could be found. This behavior is ascribed to spin disorientation at the higher temperatures, resulting in internal flux closure and decreased surface energy. This interpretation is supported

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by the fact that the contrast of the domains as observed with the longitudinal Kerr effect, as well as that of the spots on the basal plane as observed with the polar Kerr effect, decreased with increasing temperature. This increase in spin disorientation with increasing temperature could be due to increasing influence of crystal imperfections as the crystal anisotropy decreases. The magnetostriction of silicon iron in the [100] direction, which should vanish in an ideal crystal, was found to depend strongly on the annealing process to which the crystal had been subjected. The less thoroughly annealed specimens showed greater magnetostriction and less perfect domain structure. This indicates departure from uniform magnetization within the domains due to crystal imperfections. It is concluded that investigation of the departure from homogeneity of the magnetization within the domains is prerequisite to a deep understanding of various properties of ferromagnetic materials.  
Orig.art.has: 4 figures.

ASSOCIATION: Institut fiziki metallov Akademii nauk SSSR (Institute of Physics of Metals, Academy of Sciences, SSSR)

SUBMITTED: OO

DATE ACQ: 10Apr64

ENCL: OO

SUB CODE: PH

NR REF Sov: 002

OTHER: OOO

Card 3/3

KANDAUROVA, G.S.; SHUR, Ya.S.; GUSEL'NIKOVA, N.I.

Certain characteristics of the domain structure of a cobalt  
crystal. Fiz. met. i metalloved. 18 no.4:530-534 C '64. (MIRA 18:4)

l. Ural'skiy gosudarstvennyy universitet imeni Gor'kogo i Institut  
fiziki metallov AN SSSR.

KANDAUROVA, G.S.; SHUR, Ya.S.

Nucleation and formation of a domain structure in magnetically uniaxial ferromagnetic materials. Part 1. Fiz.-met. i metalloved.  
20 no.5:673-682 N-65. (MIRA 18:12)

1. Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo  
i Institut fiziki metallov AN SSSR. Submitted April 6, 1965.

REF ID: A6027783 EWP(e)/EWP(m)/EWP(w)/EWP(t)/ETI/EWP(k) IJP(c) JD/JH  
ACC NR: AP6027783 SOURCE CODE: UR/0126/66/022/001/0039/0044

AUTHOR: Shur, Ya. S.; Kandaurova, G. S.; Magat, L. M.; Bykhanova, N. N.

ORG: Institute of Metal Physics, AN SSSR (Institut fiziki metallov AN SSSR); Ural State University im. A. M. Gor'kiy (Ural'skiy gosuniversitet)

TITLE: Magnetic properties of powders of a high-coercivity Mn-Al alloy

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 1, 1966, 39-44

TOPIC TAGS: aluminum alloy, magnesium alloy, powder metal property, magnetic property, magnetic coercive force

ABSTRACT: In order to elucidate the mechanism of the processes leading to the increase in the coercive force of Mn-Al alloy when in powdered state, the magnetic properties and phase composition of powders of a Mn-Al alloy (71 wt. % Mn) were investigated as a function of particle size (2 to 800  $\mu$ ) and heat treatment. Two series of powders were considered: the first series was obtained by pulverizing the alloy when it was in ferromagnetic state (homogenization at 1100°C with cooling in air at the critical rate of 20°C/sec, leading to the formation of the metastable ordered ferromagnetic  $\tau$ -phase); the second series was obtained by pulver-

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UDC: 538.245/.248

L 09006-67  
ACC NR: AP6027783

izing the alloy when it was in nonferromagnetic state (quenching in water following homogenization at 1100°C) and in this case the high-temperature paramagnetic  $\epsilon$  - phase was deformed by supercooling. The magnetic properties of the specimens were measured in fields of up to 32,000 oe by the ballistic method, while their phase composition was determined from debye-grams. Findings: for both series of powder specimens coercive force  $H_c$  increases and specific magnetization  $\sigma_{max}$  decreases with decrease in particle size. Thus, a particle size decreases from 500 to 2  $\mu$ ,  $H_c$  increases from 1300-2000 oe to 5000 oe, while specific magnetization then decreases 4-7 times for powders in the first series and about 2 times for powders in the second series. An examination of the anisotropy of coercive force in the specimens warrants the assumption that for specimens with particle size of  $< 4 \mu$  magnetic properties are primarily determined by particles with a nearly monodomain structure, and it is this that accounts for the increase in coercive force. The decrease in specific magnetization with decrease in particle size is attributed to the dis-ordering of the magnetic  $\tau$ -phase and the formation of paramagnetic equilibrium phases. Deformation of the alloy apparently leads to a decrease in the effective dimension of ordered regions of the ferromagnetic  $\tau$ -phase and to greater isolation of these regions from each other within the powder particles. This complicates the processes of magnetization reversal and increases the coercive force. The decrease in the effective size of the  $\tau$ -phase may be attributed, for the first series of powders, to local dis-ordering of the  $\tau$ -phase during pulverization of the alloy in ferromagnetic state, and for the

Conf 2/6

L 09006-67  
ACC NR: AP6027783

second series of powders -- to the formation of nonmagnetic equilibrium phases. "The authors consider it their pleasant duty to express their appreciation to L. V. Smirnov for providing the Mn-Al alloy." Orig. art. has: 2 figures, 1 table.

SUB CODE: 111320/ SUBM DATE: 01Dec65/ ORIG REF: 002/ OTH REF: 005

Card 3/3 nst

L 08759-67 EWT(m)/EWP(t)/EPI IJP(c) JD  
ACC NM AP0029126

SOURCE CODE: UR/0048/66/030/006/1030/1034

AUTHOR: Kandurova, G. S.; Shur, Ya. S.

ORG: Institute of Metal Physics, Academy of Sciences, SSSR (Institut fiziki metallov Akademii nauk SSSR); Ural State University (Ural'skiy gosudarstvennyy universitet)

TITLE: Concerning the domain structure of magnetoplumbite /Report, All-Union Conference on the Physics of Ferro- and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 1030-1034

TOPIC TAGS: ferromagnetism, magnetic domain structure, single crystal, lead compound, iron compound, uniaxial crystal

ABSTRACT: The authors have employed the powder pattern technique to investigate the domain structure on the basal planes of  $PbO \cdot 6Fe_2O_3$  crystals. The investigation was undertaken because the theory of J.Kaczer and R.Gempel (Czechosl. J. Physics, B11, No. 3, 152 (1961)) does not account for the laminar domains with walls perpendicular to the magnetizing field that have been observed in uniaxial cobalt and magnetoplumbite crystals when the magnetizing field is perpendicular to the easy magnetization axis; the accumulation of more experimental data is regarded as a necessary first step toward the improvement of the theory of magnetic switching in uniaxial crystals.

Card 1/2

L 08759-67  
ACC NR. A.260291ES

The specimens were 0.68 to 2.4 mm thick plates with areas from 20 to 30 mm<sup>2</sup>. The powder patterns were observed on cleaved faces, which required no further processing. The angle  $\theta$  between the magnetizing field and the hexagonal [0001] axis could be determined within  $\pm 1^\circ$ , and the magnetizing field could be varied from zero to 20 kOe. Powder patterns were recorded in magnetizing fields of different strengths and at angles  $\theta$  ranging from 70 to 90°. Seventeen powder pattern photographs are presented and discussed. It is concluded from the observed domain structures that magnetization switching in directions nearly perpendicular to an easy magnetization axis is effected by formation and growth of nuclei of the new magnetic phase. The mechanism of nucleus formation and growth is discussed, but definite conclusions concerning that mechanism cannot be drawn from the available data. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 006/ OTH REF: 003

Card 2/2 bc

1. KURNAKOV, N. S.; LEPESHKOV, I. N.; KANDAUROVA, V. F.
2. USSR (600)
4. Potassium Salts - Volga - Embo Region
7. Potassium salts of the Volga-Embo and Carpathian Mountain region and their effectiveness as fertilizers, Izv. Sekt. fiz.-khim. anal. 16, No. 3, 1948.
9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

VOLKOVA, N.I., nauchnyy sotrudnik; KANDAUROVA, Ye.I., nauchnyy sotrudnik

Sanitary and hygienic aspects of working conditions on tractors and  
combines with combustion and electric motors. Gig. i san. 21 no.4;  
22-27 Ap '56.  
(MIRA 9:?)

1. Iz Nauchno-issledovatel'skogo sanitarnogo instituta imeni  
Erismana

(AGRICULTURE

hyg. aspects of operation of tractors with electric &  
combustion motors (Rus))

KANDAUROVA, Ye.I.

Noise and vibrations produced by agricultural machinery. Gig. truda  
i prof. zab. 4 no.3:23-28 Mr '60. (MIRA 15:4)

1. Moskovskiy nauchno-issledovatel'skiy institut sanitarii i  
gigiyeny imeni F.F.Erismana.

(NOISE)

(AGRICULTURAL MACHINERY--VIBRATION)

KANDAUROVA, Ye.I.

Hygienic working conditions on self-propelled combines. Gig.  
i san. no. 10:46-51 O '60. (MIRA 13:12)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta sanitarii  
i gigiyeny imeni F.F. Erishmana Ministerstva zdravookhraneniya  
RSFSR.

(COMBINES (AGRICULTURAL MACHINERY)  
(AGRICULTURE—HYGIENIC ASPECTS))

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000620330002-5

VOLKOV, A.M.; KANDAUROVA, Ye.I.; RUMYANTSEV, G.I.

Experimental study of the effect of general vibrations on the organism.  
Uch. zap. Mosk. nauch.-issl.inst.san. i gig. no.7:10-13 '60.  
(MIRA 15:2)  
(VIBRATION PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000620330002-5"

KANDAUROVA, Ye.I.

Effect of general vertical vibrations on the human organism. Uch.  
zap. Mosk.nauch-issl.inst. san. i gig. no.7: 14-16 '60.

(MIRA 15:2)

(VIBRATION...PHYSIOLOGICAL EFFECT)

KANDAUROVA, Ye.I., vrach; MAZUNINA, G.N., kand.med.nauk; PRON'KOVA, Ye.P.  
vrach; TORUBAROVA, N.A., vrach; SHATALOV, N.N., kand.med.nauk;  
SIDEL'NIKOVA, T.Y., kand.med.nauk; SHCHECHKIN, V.N., kand.med.  
nauk.

Hints of the "Zdorov'e". Zdorov'e 9 no.5:30-31 My'63.

(HYGIENE) (MIRA 16:9)

KANDAUROVA, Yu.N.

Influence of a series of neuroleptic substances on the sensitivity  
of mice to the spasmodic effect of corazole. Vop.klin., patog. i  
lech. shiz. no.1:50-52 '64. (MIRA 18:5)

1. Otdel psikhofarmakologii (zav. - kand.med.nauk G.Ya.Avrutskiy)  
Gosudarstvennogo nauchno-issledovatel'skogo instituta psichiatrii  
Ministerstva zdravookhraneniya RSFSR.

L 00881-57 EWT(d)/EWP(e)/EWP(v)/T/EWP(k)/EWP(h)/EWP(l)/EWT(m) WH/WP/DS

ACC NR AP6019848

SOURCE CODE: UR/0418/66/000/001/0025/0027

AUTHOR: Kandayan, S. G. (Engineer); Mndzhoyan, K. A. (Candidate of technical sciences); Gevorkyan, E. P. (Engineer)

52

B

ORG: None

TITLE: The MA-459 vibroprofiling machine

SOURCE: Tekhnologiya i organizatsiya proizvodstva, no. 1, 1966, 25-27

TOPIC TAGS: electroerosion machining, carbon electrode, graphite, vibration effect, machine tool / MA-459 machine tool

ABSTRACT: The authors describe the MA-459 vibroprofiling machine designed for forming the graphitized carbon electrodes use as the tool in electroerosion machining. This machine is much more productive than the conventional method of turning the surfaces of revolution for these electrodes on lathes and hand finishing the plane surfaces. The new machine also produces electrodes of higher quality. The machine consists of a stand, vibroprofiling head, tailstock, hydraulic feed unit and dust remover. The vibroprofiling head is designed for vibrating the master cutting tool which is fastened in a chuck. The spindle rotation is transmitted through an eccentric to this chuck which is connected to a special lever mechanism for plane parallel motion. The number of vibrations of the cutting tool is changed by using a four-speed electric drive. The profiling head has a special planetary mechanism for continuous control of the ampli-

Card 1/2

UDC: 621.924.6:621.3.035.2.002.2

L 0081-67

ACC NR: AP6019848

tude (radius of circular motions) of tool vibration. The tailstock is a conventional hydraulic cylinder with the piston rod connected to a second chuck for holding the electrographite stock. The hydraulic feed mechanism has a rotary pump with an electric drive. The pump provides the axial pressure necessary for machining the electrographite. The unit is equipped with a special device for periodically drawing the workpiece away from the tool to remove waste. The linear dimensions of the part being machined  $A_p$  are related to the linear dimensions of the tool  $A_t$  by the simple equation

$A_p = A_t \pm 2\Delta$  where  $\Delta$  is the total eccentricity. The plus sign corresponds the case where a depression is formed on the workpiece (a projection on the tool) while the minus sign corresponds to formation of a projection on the workpiece (a depression on the master). This profiler is approximately 25 times as productive as conventional machining. Worn graphitized carbon electrodes may be resized periodically on the MA-459 profiler using the same master tool. Orig. art. has: 2 figures.

SUB CODE: 13/ SURV DATE: none

Card 2/2 pb

KANDYL', A.B.

Increasing the length of service of electrodes in salt baths.  
Sel'khozmaschina no.5:32 My '55. (MLRA 8:6)

1. Zavod imeni "Oktyabr'skoy revolyutsii"  
(Furnaces) (Electrodes)

KANDEL', A. P.  
USSR/Medicine / Physiology

FD-922

Card 1/1      Pub 33-5/29

Author : Kandel', A. P.

Title : Characteristics of vascular reactions to expansion of arteries

Periodical : Fiziol. zhur. 40, 289-294, May/Jun 1954

Abstract : Enough evidence has been collected, as result of experiments on dogs and cats, to make it evident that processes taking place in the walls of blood vessels influence their tonus and pressor reactions as well. Expansion of walls of arteries and increased blood pressure follow rapid injection of small quantity of physiological solution of sodium chloride into the central terminal of an artery. After novocain is introduced into the blood stream, pressor effect, resulting from expansion of arteries, disappears. Increased blood pressure (and expansion of arteries) is usually accompanied by decrease in size of kidneys and spleen which is in no way connected with excitation of vasoconstrictive nerve terminals. Diagrams. Eight Soviet and four non-Soviet references.

Institution : Chair of Normal Physiology, Kirghiz State Medical Institute, Frunze

Submitted : February 20, 1952

Kandel, A.P.

v-4

USSR/Human and Animal Physiology - Blood.

Abs Jour : Ref Zhur - Biol., No 1, 1958, 3863

Author : Yu.M. Gal'perin, A.P. Kandel'

Inst : "

Title : An Analysis of the Mechanism of the Effect of Intra-Arterial Transfusions.

Orig Pub : Fiziol. zh. SSSR, 1956, 42, No 7, 559-564

Abstract : The authors studied the role of peripheral mechanisms in the cardio-vascular system stimulation in cases of intra-arterial blood transfusions after a complete and prolonged anemia of the central nervous system (CNS). They applied a modification of I.P. Pavlov's cardiopulmonary "preparat" [preparation ?]. Blood was circulating only in the small system and in the artificial system. In the latter, blood pressure was recorded. At various times after the beginning of the CNS anemia (from 20 up to 105 minutes), the animals were receiving

Card 1/3

Chair of Physiol, Freezer Med School & Chair Normal Physiol.  
Beijing State Med Inst.

BAKIN, Ye.I., prof.; STEGAYLO, Ye.A., dotsent; KANDEL', A.P., kand.med.nauk  
Conference of physiologists, biochemists, and pharmacologists of  
Central Asia and Kazakhstan. Sov.zdrav.Kir. no.2:58-61 Mr-Ap '58.  
(MIRA 12:12)  
(SOVIET CENTRAL ASIA--PHYSIOLOGY) (CHEMISTRY, MEDICAL AND PHARMACEUTICAL)

KANDEL', E.I.; KUPARADEE, G.R.

Cryothalamectomy in lesions of the extrapyramidal system. Vop. neirokhir. 28 no.4:41-47 Jl-Ag '64. (MIRA 18:3)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni Burdenko (dir. - prof. A.I. Arutyunov) AMN SSSR, Moskva.

KANDEL', Ye. I.

"Influence of the Acute Irritation of Various Parts of the Human Brain  
on the Blood Pressure, Heart Activity and Respiration." Sub 18 Jan 51, Acad  
Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow  
during 1951.

SO: Sum. No. 480, 9 May 55.

KANDEL', YE. I.

Pituitary Body - Tumors

Fifth neurosurgical conference dedicated to the memory of Academician Nikolay Nilovich Burdenko, Vop. neirokhir, 16, no. 2, 1952.

Monthly List of Russian Accessions, Library of Congress October 1952. UNCLASSIFIED

KANDEL', YE. I.

Vascular System

Observations of conditions of the cardiovascular system in trachotomy. Vop. neirokhir. 16 No 3  
1952.

Monthly List of Russian Acquisitions, Library of Congress October 1952 UNCLASSIFIED

1. KANDEL', Ye, I.
2. USSR (600)
4. Spinal Cord
7. Scientific activities. Vop. neirokhir. 16 no. 6 1952.
  
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

VINOGRADOV, I.; KANDEL', E.

Sixth Annual Neurosurgical Conference and the 3rd Plenary Session of the  
Provisional Administrative Board of the All-Union Scientific Society of  
Neurosurgeons. Vop.neirokhir. 17 no.3:56-62 My-Je '53. (MLRA 6:8)  
(Nervous system--Surgery) (Surgery--Congresses)

KANDEL, YE I.

KANDEL', Ye.I.; SPIRIN, B.G.; FANTALOVA, V.L.; FILIPPYCHEVA, N.A.

Result of an investigation of conditioned reflex functions in patients  
at a neurosurgical clinic. Vop. neirokhir. 18 no.3:21-31 My-Je '54.  
(MLRA 7:8)

1. Iz Instituta neyrokhirurgii imeni akademika N.N.Burdenko Akademii  
meditsinskikh nauk SSSR.  
(REFLEX, CONDITIONED, in various diseases,  
\*brain dis.  
(BRAIN, diseases,  
\*manifest., conditioned reflex)

KANDREL', Ye. I.

History of the doctrine of tumors of the brain. Vop. neirokhir. 18  
(MIRA 7:8)  
no.3:60 My-Je '54.

1. Iz Instituta neyrokhirurgii imeni akademika N.N.Burdenko Akademii  
meditsinskikh nauk SSSR.  
(BRAIN, neoplasms,  
\*hist. of research in Russia)

KANDEL', E. I.

Assymmetric arterial pressure in brain tumors. Vop.neirokhir. 19  
no.3:14-20 My-Je '55. (MLRA 8-6)

1. Iz Nauchno-issledovatel'skogo ordena Trudovogo Krasnogo Znameni  
instituta neyro-khirurgii imeni akad. N.N.Burdenko Akademii medi-  
tsinskikh nauk SSSR.

(BRAIN, neoplasms,

blood pressure in, assymetry)

(BLOOD PRESSURE, in various diseases,

cancer of brain, assymetry of arterial pressure)

KANDEL' B. I., kandidat meditsinskikh nauk

Brain surgery. Zdorov'e 2 no.10;9-11 O '56.  
(BRAIN--SURGERY)

(MLR 9:11)

KANDIL', E.I.

Controlled arterial hypotension induced ganglioblocking agents and  
its use in neurosurgery. Vop.neirokhir. 20 no.3:48-54 My-Je '56.  
(MIRA 9:8)

1. Iz nauchno-issledovatel'skogo ordena Trudovogo Krasnogo Znameni  
instituta neyrokhirurgii imeni akad. N.N.Burdenko Akademii Meditsin-  
skikh nauk SSSR.

(NERVOUS SYSTEM--SURGERY) (HYPOTENSION)

VINOGRADOVA, I.N.; VIEHERT, T.M.; KANDEL', E.I.

Thromboembolism of the heart and of the pulmonary following surgery  
of the spinal cord. Vop.neirokhir. 20 no.4:26-34 Jl-Ag '56.  
(MIRA 9:11)

1. Iz Nauchno-issledovatel'skogo ordena Trudovogo Krasnogo Znameni  
instituta neirohirurgii imeni akad. N.N.Burdenko Akademii meditsinskikh nauk SSSR.

(HEART, blood supply

thromboembolism, caused by surg. of spinal cord)

(ARTERIES, PULMONARY, dis.

same)

(SPINAL CORD, surg.

causing thromboembolism of heart & pulm. arteries)

KANDEL', B.I.

YEGOROV, B.G., professor; KANDEL', B.I.

Use of ganglion-blocking agents in neurosurgery and in postoperative stages. Vop.neurokhir. 20 no.6;3-9 N-D '56. (MLRA 10:2)

1. Iz Nauchno-issledovatel'skogo ordena Trudovogo Krasnogo Znameni Instituta neirokhirurgii imeni akad. N.N.Burdenko Akademii meditsinskikh nauk SSSR.

(BRAIN, surgery,

ganglion blocking agents in (Rus))

(AUTONOMIC DRUGS, therapeutic use,

ganglion blocking agents in brain surg. (Rus))

YEGOROVA, B.G., prof., Active Member of the Academy of Medical Sciences, and  
KANDELYA, E.I., Candidate of Medical Sciences.

"The Prophylaxis and therapy of brain Edema and Acute Circulatory disturbances Occurring During Brain Injuries," Ganglion-blocking preparations were used in 220 operations..  
Paper presented at 11th Session AMG USSR on Trauma, April 1957.

SO: Sum. 1644

KANDEL', Eduard Izrailevich, kand.med.nauk; HENYUMOV, O.M., red.;  
GUBIN, M.I., tekhn.red.

[Achievements i modern anesthesiology; new methods of anesthesia  
and control of body functions in surgery] Dostizheniya sovremennoi  
anessteziologii; novye metody obezbolivaniia i upravleniya  
funktsiyami organizma v khirurgii. Moskva, Izd-vo "Znanie," 1957.  
47 p. (Vsesoiuznoe obshchestvo po rasprostraneniu politicheskikh  
i nauchnykh znanii. Ser.8, no.43) (MIRA 11:1)

(ANESTHESIA)

*KHAD* YEGOROV, B.G.; KANDEL', E.I., kandidat meditsinskikh nauk

Injuries of the central nervous system; from materials of the eleventh session of the general meeting of the Academy of Medical Sciences of the U.S.S.R. Vest. AMN SSSR 12 no.4:20-31 '57.  
(MIRA 10:10)

1. Deystvitel'nyy chlen AMN SSSR (for Yegorov)  
(NERVOUS SYSTEM--WOUNDS AND INJURIES)

BRYUSOVA, S.S.; BLINKOV, S.M.; KANDEL', E.I.

First International Congress of Neurology in Brussels, July 21-28,  
1957. Vop.neirokhir. 22 no.2:44-52 M-Ap '58. (MIRA 11:4)  
(NERVOUS SYSTEM--DISEASES) (BRAIN--SURGERY)  
(HYPOTHERMIA)

EXCERPTA MEDICA Sec 8 Vol 12/5 Neurology May 59

2146. PROPHYLAXIS AND TREATMENT OF CEREBRAL ODEMA AND ACUTE DISORDERS OF BLOOD CIRCULATION IN INJURIES OF THE BRAIN  
(Russian text) - Igorov B. G. and Kandel E. I. - VOPR. NEIROKHIR.  
1958, 2 (3-7)

- Cerebral oedema and acute disorders of the circulation (multiple haemorrhages, per diapedesis, in the brain and viscera) after injuries of the brain or neurosurgical operations are only different forms of the same pathological process associated with a generalized disturbance in the permeability of the blood vessels. The main factor in these actions is an irritation of the vasomotor centres in the brain stem and hypothalamus. Early administration of ganglioplegics (i. v. at the operation, i. m. during 3 days after the operation) decreases the size of postoperative oedema and prevents the consecutive haemorrhages in the brain and viscera.

Christ - Brno (VIII, 18)

Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni akad. N.N. Burdenko Akademii meditsinskikh nauk SSSR.

KANDEL', N.I., kand.med.nauk

A new page in the book of science. Zdorov'e # no.9:12-13 S '58  
(MIRA 11:10)

(ANESTHESIOLOGY)

KANDEL', E.I., kand.med.nauk

Tumors of the optic thalamus. Probl.sovr.neirokhir. 3:165-187  
'59. (MIRA 16:6)  
(OPTIC THALAMUS--TUMORS)

VIKHERT, T.M.; KANDUL', E.I.; LYASS, F.M.

Experimental studies on reactive changes in the brain following  
intracerebral administration of radioactive colloidal gold.  
Med.rad. 4 no.9:56-63 S '59. (MIRA 12:11)

1. Iz Nauchno-issledovatel'skogo ordena Trudovogo Krasnogo  
Znameni instituta neyrokhirurgii imeni akad. N.N.Burdenko  
ANU SSSR.

(GOLD radioactive)  
(BRAIN radiation eff)

KANDRIL', M.I., kand.med.nauk; VASIN, N.Ya.

Current problems in neurosurgery. Vest.AMN SSSR 14 no.7:  
80-86 '59. (MIRA 12:9)  
(NERVOUS SYSTEM--SURGERY)

KANDEL', E.I., kand.med.nauk (Moskva)

Comments on English neurosurgery. Vopr.neirokhir. 23 no.2:35-39  
Mr-Ap '59. (MIRA 12:4)

(NEUROSURGERY,  
in Gt. Brit. (Rus))

KANDEL', E.I.

Symposium on the problem of acute craniocerebral injuries. Vop.  
neirokhir. 23 no.5:50-52 S-O '59. (MIRA 12:11)  
(BRAIN--WOUNDS AND INJURIES)

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000620330002-5

KANDEL', E.I., kand.med.nauk (Moskva)

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(HYPOPHYSECTOMY)

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